

ABSTRACT

The invention is a composite sheet used to bond semiconductor elements and circuit substrates together, containing a resin with magnetic and conductive particles. The invention includes processes for making the sheet and for using the sheet. The sheet includes a binder which contains photocuring and thermosetting components, and a fibrous filler which is both conductive and magnetic. A semicured conductive sheet can be obtained by light irradiation of the sheet. Thermocompression can be used for producing a semiconductor package. Reductions in conductive part pitch are achieved by adhering a noble metal onto the surface of the sheet. Thermal conductivity can be improved by inclusion of a filler having high thermal conductivity. Projections of binder containing magnetic fibrous fillers allows stable electrical conduction. Dispersion of fine particles in the binder inhibits deterioration of the sheets insulating abilities.

D9827927, 062101